Computing for Human Services

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Chapter 5

Computing Role in Educating Deaf Children

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5.1. Introduction

The major priority of education for the deaf student is language acquisition and communication. The right to language is necessary to educational growth and central to the human experience. Failed communication leads to failed education, and failed education leads to failed adulthood. Communication is central to all subsequent education in every subject area, including mathematics. It appears, however, that mathematics is not given the serious attention it deserves [1]. The field of deaf education as a whole must recognize the significance of mathematical knowledge and make mathematics education a priority to enable the deaf population to assume a productive place in society and the marketplace.

5.2. Educating Deaf Children

In a number of published articles reviewed very rare was concerned with education of deaf children. As late as 1994, studies showed that teacher preparation programs in deaf education fell short of providing students adequate instruction related to mathematics education. Programs focused on issues related to language and communication, to the exclusion of most other subject areas. Comparatively little research has been conducted on the status of mathematics reform in deaf education. Drill and practice and rote memorization dominated, and the use of technology was limited to drill and practice. A national survey of teachers and administrators was conducted to determine the extent of these reforms in the mathematics education of deaf students. Results show that some aspect of reform, (such as problem solving, use of concrete materials, etc.) have been incorporated into the deaf education mathematics curriculum but that many traditional techniques, (such and drill and practice, rote memorization, etc.) remain in use. The number of teachers who actively integrated mathematics across disciplines was limited.

Linguistic difficulty with math word problems has been identified as a problem area for young deaf children. College level deaf students exhibit difficulties with math problem solving tasks, particularly when presented these tasks in text format as typical word problems. Language structures that particularly vex deaf students in word problems include conditionals, (if, when) comparatives (greater than, the most)